

The logo consists of a large, white, stylized letter 'A' with a double quote mark to its right. The background of the entire slide is a photograph of a modern university building with large windows and a courtyard with greenery. A circular inset in the center shows a group of people gathered around a table, looking at documents and a red sign that says 'THE TEST SITE'. There are also blue bicycles parked nearby.

A”

Aalto University

Aalto Sustainability Hub

Sustainability:
complexity and impact

Paula Schönach
Marleen Wierenga

Timetable

10:00-10:05 Welcome

10:05-10:20 Introduction to sustainable development

10:20-10:35 (Un)Sustainability impact and complexity

10:35-11:00 Group work of students

10:35-11:00 Structured discussion + wrap up + goodbye, *separate Zoom*

11:00-11:10 Presenting 3 group works (random selection)

11:10-11:15 Closing and thank you!

Learning objectives

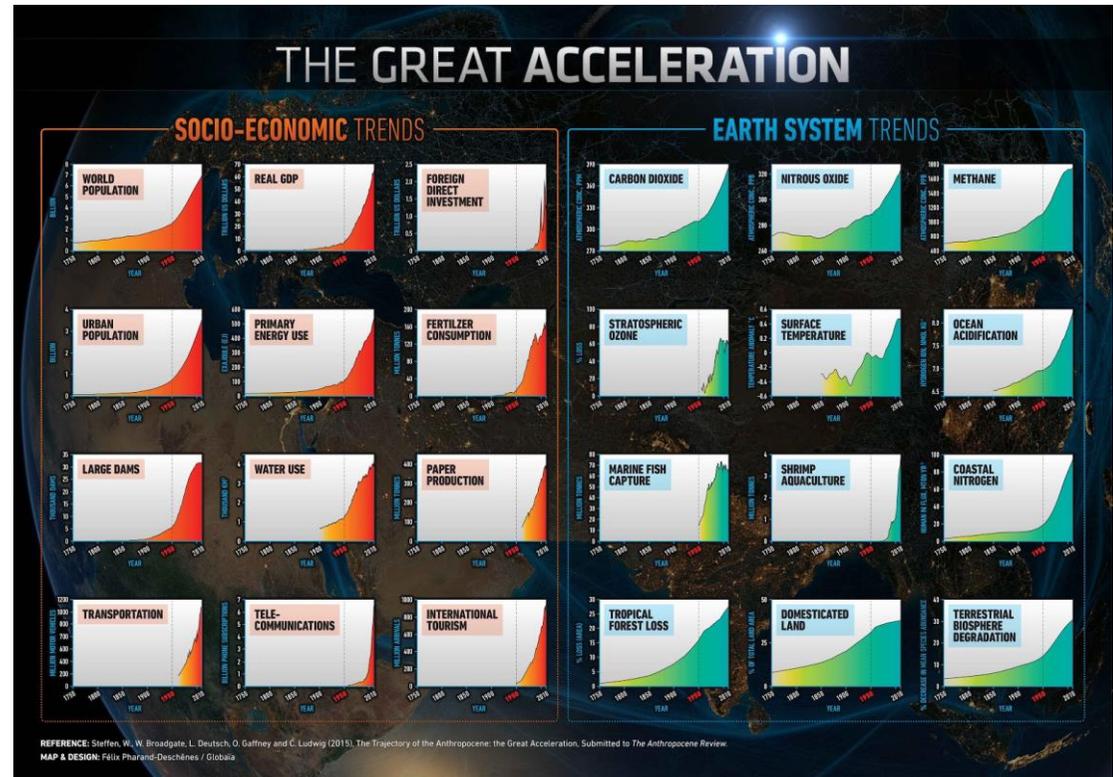
- Gain basic knowledge about the sustainability crisis and the SDG framework
- Explore (and identify) sustainable and scalable business opportunities
- Understand the role of businesses in relation to sustainability
- Think critically through an ethical and sustainable lens

Anthropocene – the Epoch of Man (Crutzen

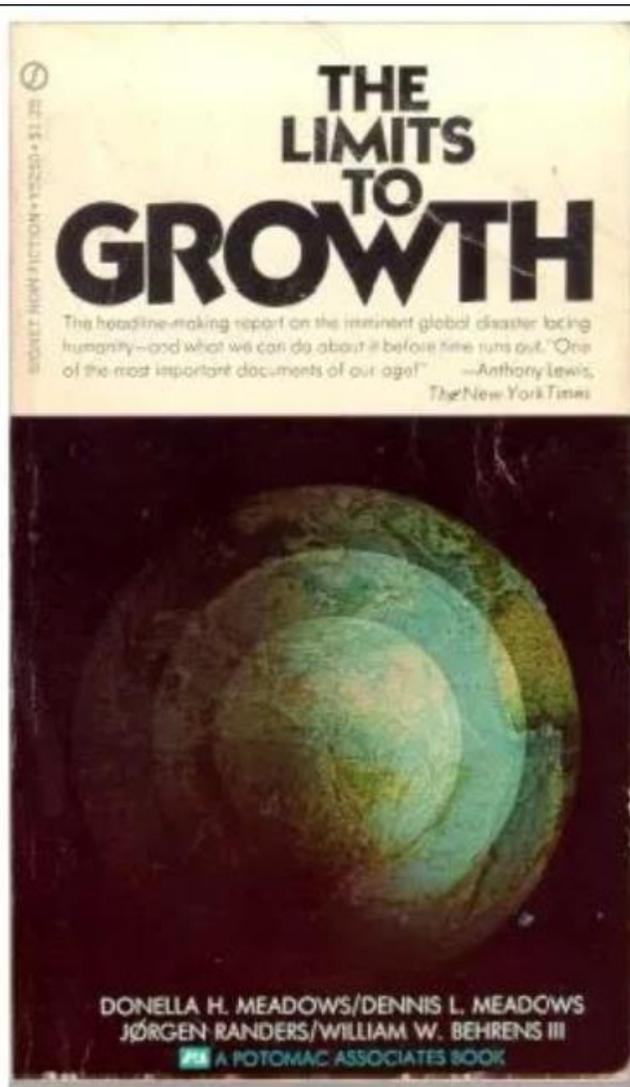
2002)

Sustainability crisis

- unprecedented
- large scale - global
- long-term
- pervasive
- interconnected + reinforcing
- human induced
- No simple, easy, cheap solutions



Steffen, et al 2015a.



OUR COMMON FUTURE

THE WORLD COMMISSION
ON ENVIRONMENT
AND DEVELOPMENT

United Nations

A/RES/70/1



General Assembly

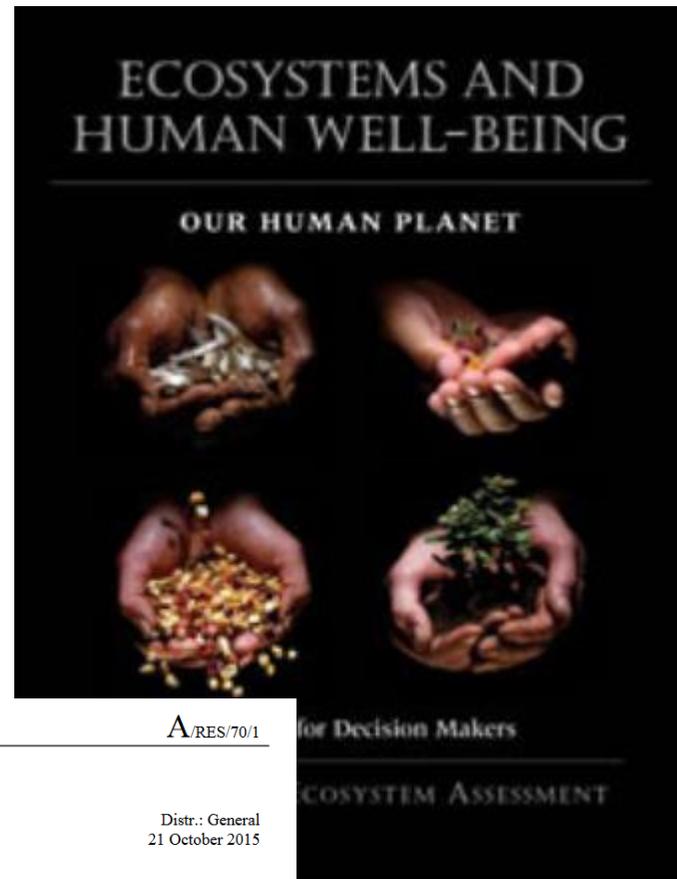
Distr.: General
21 October 2015

Seventieth session
Agenda items 15 and 116

Resolution adopted by the General Assembly on 25 September 2015

[without reference to a Main Committee (A/70/L.1)]

70/1. Transforming our world: the 2030 Agenda for Sustainable Development



Aalto
Sustainability
Hub

Definitions

Sustainability: characteristics of a system

- sustain (latin: sustinere): uphold, support, to continue supporting over a timespan
- able (latin: habilis): have the capacity or power to do something

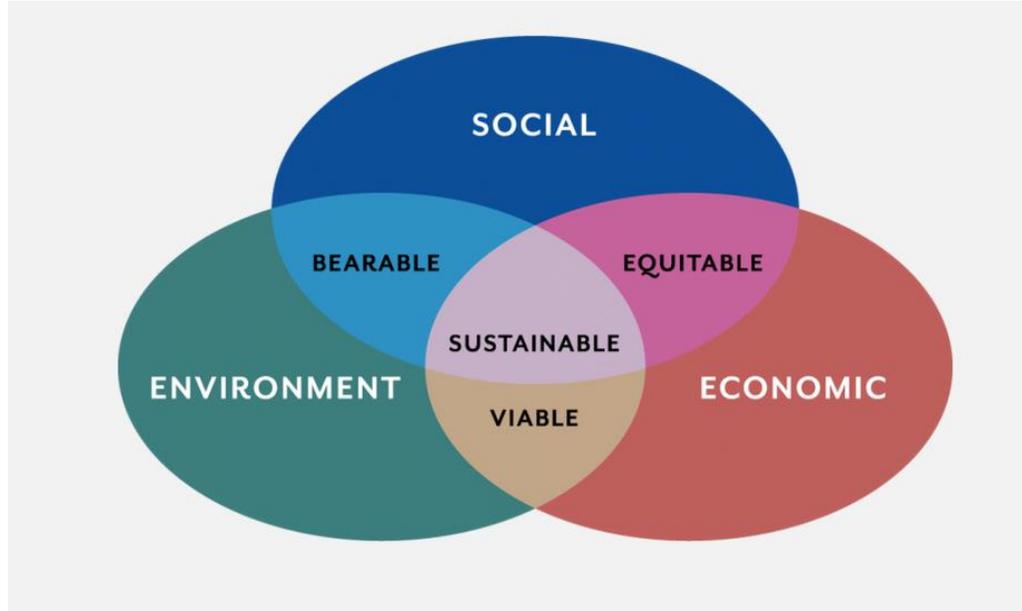
Development: intentional change towards something better

Sustainable Development is...

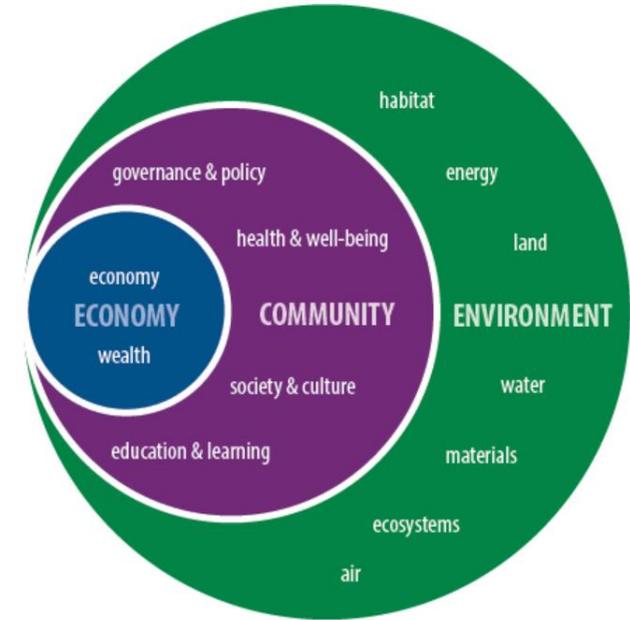
"...development that meets the needs of the present while safeguarding Earth's life-support system, on which the welfare of current and future generations depends". (Griggs et al 2013)

"...enough for all, for ever." (<https://www.biosphere.org.au/sustainable-future/>)

Dimensions of sustainable development



Source: <https://www.biosphere.org.au/sustainable-future/>

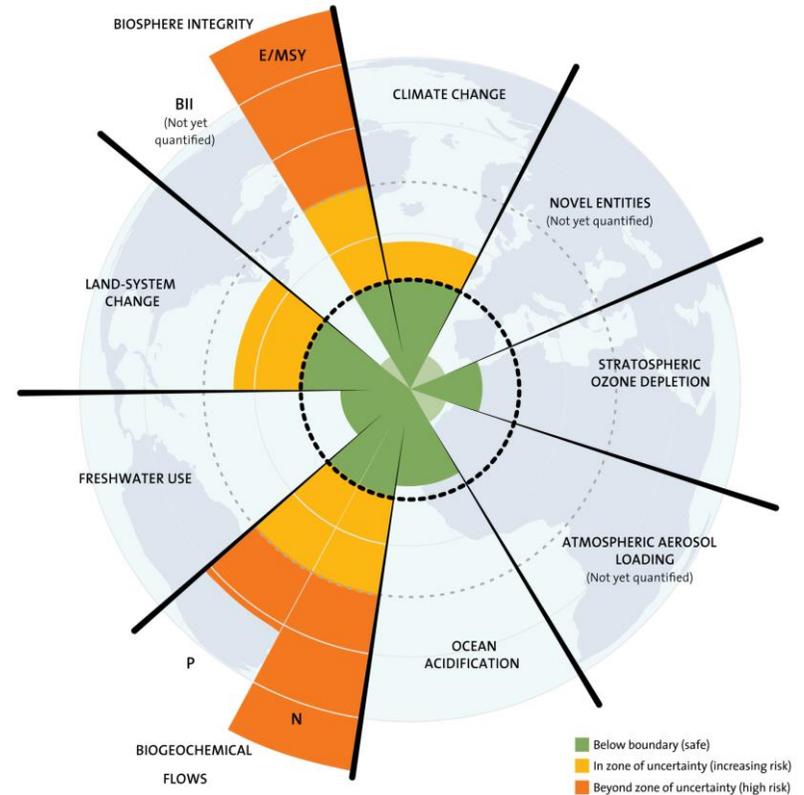


http://www.futureoxford.ca/Community_Sustainability_Plan.aspx

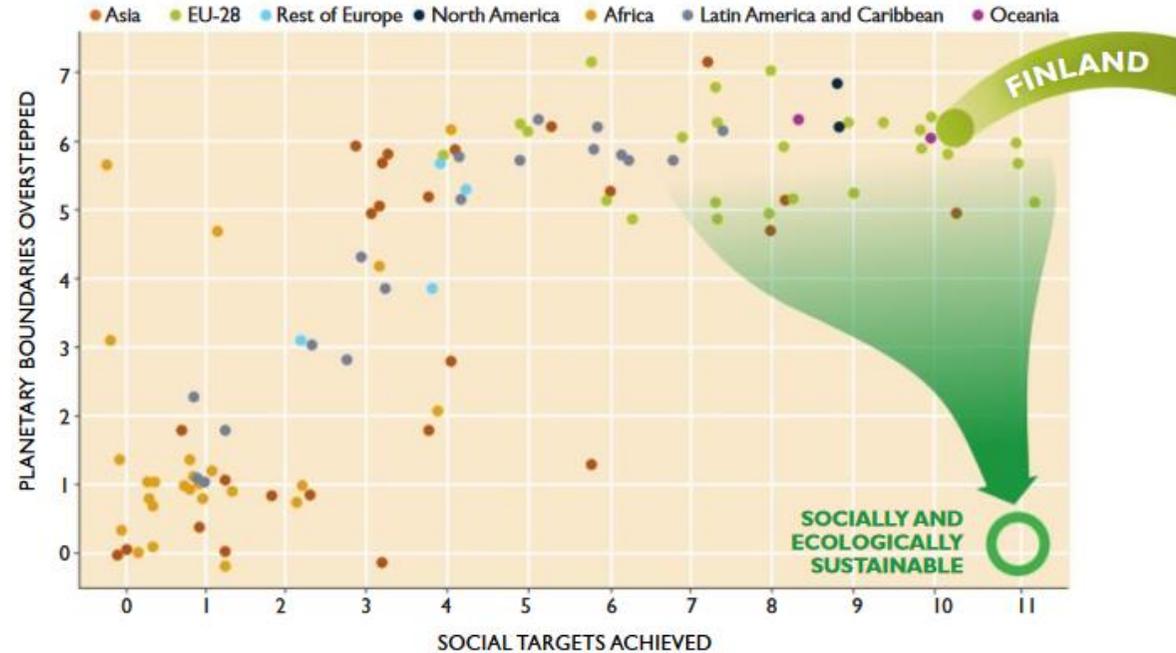
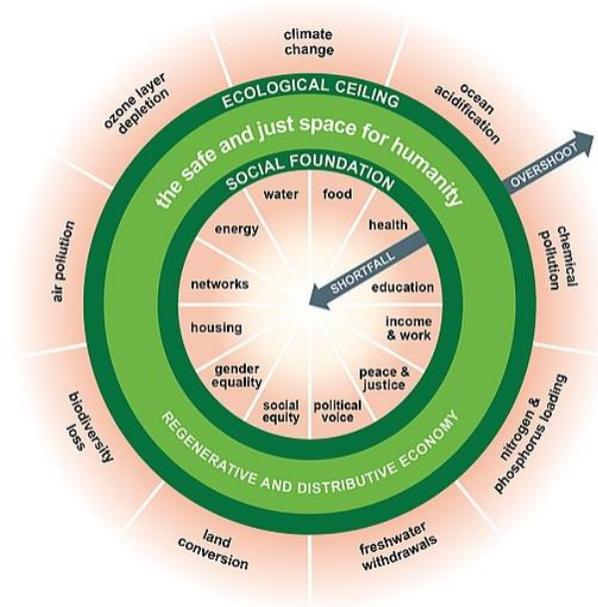
Planetary Boundaries

(Rockström et al 2009, updated Steffen et al 2015b)

- Earth system processes
- Defining a **safe operating space** for humanity
- Nine boundaries
- 3/9 currently on safe level
- 4/9 transgressed
- 2/9 not yet quantified



Adding social boundaries: safe and just space



Sustainable development goals (SDGs)

- UN Agenda 2030 for Sustainable Development (in force since 2016)
- 17 Goals, 169 sub-goals
- Thematic
- Holistic
- Multidimensional
- Interactions of SDGs



What is impact?

- Three dimensions of sustainability
 - Economic, social and environmental value
- Systems perspective
 - Positive and negative impact
 - Intended and unintended consequences
- Who is being impacted?
 - Broader group of stakeholders considered
 - Network-centric perspective: employees, investors, suppliers, partners, distributors, media, research institutes
 - Holistic approach: The environment, society

Companies with positive impact



PURE WASTE

100% RECYCLED TEXTILES

VATTENFALL



The complexity of sustainability in business

- Legacy of an unsustainable world
- Lack of corporate commitment in large established firms
- Management practices and lack of knowledge
- Competition
- Conflicting stakeholder needs
- Supply chains across many countries

Conclusion

- Sustainable Development Goals are a framework to understand the global challenges
- Solutions to solve problems needed urgently
- Businesses increasingly play a role in finding solutions
 - Complexity
 - Impact

Continuation of the session:

- Participants and general audience: Structured discussion starts in separate Zoom-session, copy the link from the chat
- Registered students -> remain in this session for further instructions and group work

Q & A

Group exercise

- Each group is assigned a product or service category
- **Think** of the impacts the category has on its stakeholders
 - Positive and negative
 - Intended and unintended
- **Develop and draw a map** with the different positive and negative impacts in Jamboard (link in the chat)
 - 20 min time for the exercise
- **Prepare to present** (one random group per product category will present)
 - What is the most interesting (positive/negative) impact?
 - 2 min for each team

Group work themes

1) Smart watch



2) Food delivery service

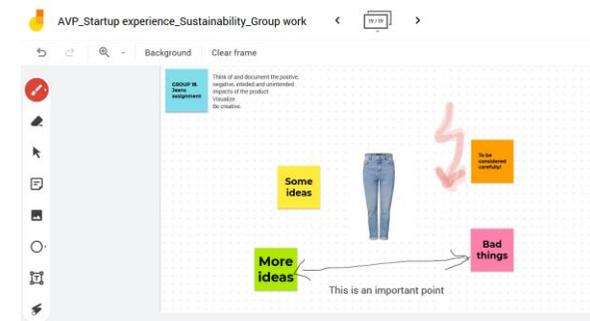


3) Pair of jeans



Group exercise in Jamboard

1. Go to the board that represents your group number.
2. Start with a round where everyone of the group shares his/her first thought about impacts and makes a sticky note of it on the board.
3. Keep listing positive and negative, intended and unintended impacts to the stakeholders, including the environment and society. Use arrows/lines etc. to make connections, indicate pos./neg., etc.
4. Be creative, think broadly!
5. Agree, which impact you would like to highlight to the others, and who will present it.
6. You will return to the main session automatically when time (20 min) is up! 1 minute warning)



Group work presentations

Going forward

- Thinking about your own entrepreneurial ideas and business models
 - What is the impact **you** want to create?
 - How to increase the positive impacts?
 - How to mitigate the negative impacts?



Aalto University

Aalto
Sustainability
Hub

Thank you!
Have a great course!

Paula Schönach, PhD (Aalto Sustainability Hub),

paula.schonach@aalto.fi

Marleen Wierenga, PhD (School of Business),

marleen.wierenga@aalto.fi

Literature

Crutzen P.J. 2002. Geology of Mankind. *Nature* 415(January):23

Steffen, W. et al (2015a) The trajectory of the Anthropocene: The Great Acceleration. *The Anthropocene Review* 2 (1): 81-98. <https://doi.org/10.1177/2053019614564785>

Griggs, D., Stafford-Smith, M., Gaffney, O. *et al.* Sustainable development goals for people and planet. *Nature* **495**, 305–307 (2013). <https://doi.org/10.1038/495305a>

Steffen et al. (2015b). Planetary Boundaries: Guiding human development on a changing planet. *Science* Vol. 347 no. 6223

O'Neill, D.W., Fanning, A.L., Lamb, W.F. *et al.* A good life for all within planetary boundaries. *Nat Sustain* **1**, 88–95 (2018). <https://doi.org/10.1038/s41893-018-0021-4>

Raworth, Kate (2017). [Doughnut economics : seven ways to think like a 21st century economist.](#)

Vermont: White River Junction